

REMARKS

Reconsideration is requested.

Claims 54, 56-58, 60-76, 78-80 and 82-96 are pending. Claims 71-74 and 93-96 have been withdrawn from consideration. The details of claims 55, 59, 77 and 81 have been added to independent claims 54 and 75, respectively, without prejudice. Claim 76 requires the coloring agent to be a dye.

Reconsideration and withdrawal of the restriction requirement is again requested. A Rule 181 Petition for the Commissioner's review and consideration of the restriction requirement is attached.

Specifically, the Commissioner is requested to review and reverse the restriction requirement and instruct the Examiner to forward a new restriction requirement, if believed necessary, which includes a proper statement of the subject matter of the claims and basis for any requirement for restriction and election.

The applicants elected the subject matter of the Examiner's Group I of the Office Action dated March 29, 2005 in the Response of April 7, 2005.

The Petition of December 18, 2006, relating to the restriction requirement was Dismissed in a Decision dated June 12, 2007 due to the fact that the restriction requirement had not been made Final and the Petition of June 12, 2007 was therefore premature.

The Examiner has made the restriction requirement Final in the Office Action of July 25, 2007 and the attached Petition is therefore submitted to be timely. Review and reconsideration by the Commissioner is requested.

Specifically, the Office Action of July 25, 2007 states that an election between one of the following allegedly patentably distinct Groups of claims is required:

Group I: claims 54-70 and 75-92 "drawn to ink composition"; and

Group II: claims 71-74 and 93-96 "drawn to recording method".

As applicants respectfully submit however that

claims 54-63, 70, 75-85 and 92 are drawn to inks;

claims 64-67 and 86-89 are drawn to recording methods;

claims 68-69, 73-74, 90-91 and 95-96 are drawn to a recorded image; and

claims 71-72 and 93-94 are drawn to an ink head.

Withdrawal of claims "71-74, and 93-96, drawn to recording method", appears to be based on an incorrect definition of the claimed subject matter. The basis of the restriction requirement is not understood and clarification is requested in a further new Office Action which sets forth a properly defined restriction requirement and allows the applicants an opportunity to make an election based on same. Moreover, if the Examiner is intending to withdraw claims to "recording methods" from consideration then presumably only claims 64-67 and 86-89, which define "recording methods", should be withdrawn and the remaining claims examined on the merits.

Issuance of a restriction requirement which completely and properly defines the claims, and affords the applicants an opportunity to make an informed election which is properly based in the Rules and practice of the MPEP, are requested. A Decision on the attached Petition prior to the Examiner's next substantive Action is requested as the Decision may effect the scope of examination.

The provisional obviousness-type double patenting rejection of claims 54-57, 60, 62, 70, 75-79, 82, 84, 85 and 92 over claims 21, 22, 47 and 48 of the copending application Serial No. 10/713,226 is believed to be obviated by the above amendments. Specifically, the inclusion of the details of claims 59 and 81, which were not provisionally rejected, in the independent claims, is believed to obviate the rejection. The applicants note that application Serial No. 10/713,226 has issued as U.S. Patent No. 7,264,664 on September 4, 2007. Withdrawal of the obviousness-type double patenting rejection is requested.

The Section 102 rejection of claims 54-58, 60-65, 68-69, 75, 77-80, 82-87 and 89-91 over Kato (U.S. Patent No. 6,440,203) is traversed. Reconsideration and withdrawal of the rejection are requested. The claims are submitted to be patentable over Kato and consideration of the following in this regard is requested.

As noted above, the details of claims 59 and 81, which are indicated as novel over Kato, have been added to the independent claims 54 and 75, such that the claims are submitted to be patentable over the cited art.

Moreover, the Examiner is urged to appreciate that the presently claimed invention provides an ink composition wherein the composition is required to satisfy the stated relationship between the static surface tension and the dynamic surface tension. This requirement of the claim is not merely a new property of an old composition, as appears to be suggested by the Examiner in comparing the claims to the cited Kato patent. Rather, the recited relationship between static surface tension and dynamic surface tension of the claims defines the composition which has been demonstrated in the application to provide superior and unexpected results. It is the combination of

these two critical features (i.e., dynamic surface tension and static surface tension meeting the recited formula) which are essential to producing the combined results of these superior ink composition of the claims. None of the cited art describes or defines the features of dynamic surface tension and static surface tension of the claims or the required relationship between the two to produce the claimed ink composition. The results produced by the claimed composition are new and unobvious and should be sufficient to define a patentably distinct composition. The combination of these critical features is submitted to be more than within the mere skill of one of ordinary skill from the teachings of the cited art and are believed to be more than a mere choice in matters of degree. See, for example, In re Jones, Jr., 41 USPQ 501, 503 (CCPA, 1939). While Kato may describe in a general way "surface tension" of about 25 to 50 mN/m of Kato's composition in column 8, lines 45-47, there is no disclosure of separate dynamic surface tension and static surface tension of the composition of Kato or the importance of the relationship between the two to produce the patentable selection of the presently claimed composition. Withdrawal of the Section 102 rejection of claims 54-58, 60-65, 68-69, 75, 77-80, 82-87 and 89-91 over Kato is requested.

The claims are submitted to be patentable over Kato.

The Section 102 rejection of claim 76 over Lauw (U.S. Patent No. 5,534,051) is traversed. Reconsideration and withdrawal of the rejection are requested as the Examiner has not demonstrated where Lauw inherently or literally teaches the invention of claim 76.

Specifically, the Examiner has not indicated where the cited reference specifically teaches the requirement of claim 76 with regard to being in a relationship between

dynamic surface tension measured at a bubble frequency of 10 Hz in a dynamic surface tension at a bubble frequency of 1 Hz, as recited in the claims. As noted above with regard to the rejection based on Kato, the present specification describes the patentably distinct properties of the claimed invention related to the chemical characteristic of dynamic surface tensions which are not described in the cited art. The applicants submit, with respect, that an anticipating reference must teach every aspect of the claimed invention. The cited Lauw patent is not believed to literally or inherently provide the teaching of a composition chemically defined by the relationship between the dynamic surface tension recited in claim 76. Withdrawal of the Section 102 rejection of claim 76 over Lauw is therefore requested.

The Section 103 rejection of claims 54-62, 64, 65, 68, 69, 75, 77-84, 86, 87, 90 and 91 over Yatake (U.S. Patent No. 5,746,818) is traversed. Reconsideration and withdrawal of the rejection are requested. The claims are submitted to be patentable over Yatake and consideration of the following in this regard is requested.

By the Examiner's own admission, Yakate fails to teach the properties required by the claimed ink compositions. See, page 7 of the Office Action dated September 23, 2004 and page 7 of the Office Action dated September 21, 2006 and page 8 of the Office Action of July 25, 2007. Moreover, the applicants submit that Yakate fails to suggest a composition of the claims. The Examiner's "position" (id) appears to be relying on an allegation of inherency (i.e., "it would have been obvious....that the ink composition [of the cited art]....would have similar properties as claimed by Applicant..."), which is inappropriate as a basis for a Section 103 rejection, as opposed

to an assertion that it would have been allegedly been obvious to have modified the compositions of Yatake to have made the presently claimed invention.

The Examiner is urged to appreciate that obviousness requires some teaching or suggestion in the cited art which would have motivated one of ordinary skill in the art to have made the claimed invention, with a reasonable expectation of success. Yatake fails to provide any such motivation. Moreover, inherent anticipation requires a demonstration or reasonable suggestion that the claimed compositions necessarily flow from the cited art. Further, the examples of the present specification demonstrate that the selection of compositions of the claims which are required, as a definition of their chemical composition, to meet the recited relationship between dynamic and static surface tensions, provide unexpected and superior results as compared with compositions outside the claims which may be taught by general references of the art. The Examiner has not established that claimed invention is taught by the cited art. The claims are submitted to be patentable over Yatake.

The Section 103 rejection of claims 54-62, 64-69, 75-84 and 86-91 over Hayashi (U.S. Patent No. 6,500,248) is traversed. The claims are submitted to be patentable over Hayashi and consideration of the following in this regard is requested.

As with the rejection based on Yatake, the Examiner appears to be relying on an alleged inherent teaching of Hayashi ("However it is the position of the Examiner that it would be [sic, have been] obvious to one of ordinary skill in the art that the ink composition as taught by Hayashi would have similar properties as claimed by Applicant absence [sic, absent] evidence to the contrary." See, page 9 of the Office Action dated July 25, 2007 to allege that the claimed invention would have been obvious from

Hayashi. There is no teaching or suggestion of the presently claimed invention in Hayashi.

Unlike Yatake, Hayashi does at least teach a surface tension of the disclosed ink compositions (i.e., not more than 40 mNm^{-1} at 20°C (see, column 2, lines 59-60 of Hayashi)). Hayashi does not however teach whether the cited surface tension is a static or dynamic measurement. More importantly, Hayashi fails to teach or suggest the relationship between static and dynamic surface tension of the claimed invention. This relationship of the claims is a physical property defining the claimed composition which has been discovered to produce the desired and unexpected results demonstrated in the present application.

The cited art fails to teach or suggest the unexpected beneficial properties provided by the claimed invention, as exemplified by the present disclosure. The Examiner is requested to see, for example, Table 2 on page 75 of the present disclosure, which provides examples of the claimed invention and comparative examples wherein both the static surface tension and dynamic surface tension are each less than 40 mN/m . Unexpected benefits however are demonstrated where the exemplified compositions satisfy the claimed relationship between the dynamic surface tension and static surface tension.

The claimed invention is patentable over Hayashi.

The Section 103 rejection of claims 66, 67, 88 and 89 over Kato in view of JP 41-52925 and Uemura (U.S. Patent Application Publication No. 2001/0029870), is traversed. Reconsideration and withdrawal of the rejection are requested in view of the above and the following comments.

Initially, the applicants again note that the rejected claims 66, 67, 88 and 89 define a recording method which appears to be the subject matter of the Examiner's Group II as stated on page 2 of the Office Action dated July 25, 2007, and allegedly withdrawn from consideration. Moreover, claims 66, 67, 88 and 89 are all directly or indirectly dependent from independent claims 54 and 75, which the Examiner has not rejected as allegedly being obvious over the combination of Kato, JP 41-52925 and Uemura. These dependent claims 66, 67, 88 and 89, to the extent they are properly under consideration, are submitted to be patentable over the cited combination of art for reasons similar to the Examiner's apparent acknowledgement that the independent claims are patentable over the cited combination of art. Clarification is requested in the event the rejection is maintained.

Withdrawal of the Section 103 rejection of claims 66, 67, 88 and 89 over Kato, JP 41-52925 and Uemura is requested.

The claims are submitted to be in condition for allowance and a Notice to that effect is requested. The Examiner is requested to contact the undersigned in the event anything further is required.

KAMOTO, T. et al.
Appl. No. 10/665,088
October 25, 2007
Amendment

Respectfully submitted,

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